SEBESTA AREA COMPREHENSIVE PLAN AMENDMENT

College Station, Texas

Prepared By
The City of College Station
1101 Texas Avenue
College Station, Texas 77842
(979) 764-3570

April 2006

CITY OF COLLEGE STATION

TABLE OF CONTENTS

APPENDICES

BACKGROUND

In October 2005, the City of College Station completed a traffic impact study quantifying the anticipated traffic impacts of a proposed land use change in the area generally surrounded by Emerald Parkway to the north, Woodcreek Drive to the south, State Highway 6 (SH 6) to the west, and several residential subdivisions to the east. These subdivisions include Emerald Forest, Woodcreek, and Foxfire.

Following this study, representatives of the surrounding neighborhoods and the applicant of the proposed land use change worked together to develop a land use plan that is agreeable to each party (Appendix A). It should be noted that the land uses agreed upon were similar and slightly less intense than those used in the traffic impact study. One term of this agreement states that a traffic mitigation plan should be developed to "alleviate the high volume of cut-through traffic that will result on Emerald Parkway, Sandstone Drive, Sebesta Road, Foxfire Drive and Stonebrook Drive."

PURPOSE STATEMENT

Due to the considerable amount of undeveloped non-residential land uses adjacent to the Woodcreek, Foxfire and Emerald Forest neighborhoods, the potential for significant traffic increases through these neighborhoods, and the lack of appropriate thoroughfares to accommodate this traffic, the City of College Station and these neighborhoods agree that a traffic mitigation plan is warranted to preserve neighborhood integrity.

If proper land use and transportation planning were conducted prior to the initial development of this area, a traffic mitigation plan would not be necessary. In the future, the City of College Station and our citizens should require that adequate planning be conducted prior to any development to ensure that situations such as this are avoided. Committing the necessary resources for good short- and long-term planning will repay itself through great neighborhoods, reduced congestion, and a higher overall quality of life.

TRAFFIC MITIGATION PLAN

The traffic mitigation plan, including a monitoring process and an action plan, was developed as a collaborative effort between the City of College Station staff and neighborhood representatives to reduce or eliminate the negative effects of cut-through traffic. It should be noted that cut-through traffic is defined as vehicles driving through the neighborhood from one non-residential use to another non-residential use. These negative effects typically include excessive traffic volumes or speeds.

There is a variety of mitigation tools that can be used depending on the effect to be mitigated, as well as the severity of the desired mitigation. For example, if the intent of mitigation is to lower traffic speeds, a lane narrowing device (e.g., median, curb extensions) could be used. If the intent of mitigation is to decrease traffic volume, more severe types of mitigation, such as a street closure could be used. Although the purpose of the mitigation is to alter driving behavior of drivers cutting through the neighborhood, the mitigation will also have a significant effect on local residents as they will have to deal with the mitigation on a daily basis. For this reason, the

negative effects on the neighborhood must be balanced with the positive effects of reducing traffic volumes and/or speeds.

More information on potential traffic calming devices is included in Appendix B: Neighborhood Traffic Calming Toolbox.

Traffic Volume Thresholds

In the development of this traffic mitigation plan, city staff and neighborhood representatives reviewed each of the collectors in the study area to establish traffic volume thresholds. When the traffic volume on any of these roadways exceeds the documented threshold, the traffic mitigation process will be initiated. The following thresholds were developed based on physical criteria as shown in Appendix C: Summary of Guidance Involving Individual Street Characteristics.

Traffic Volume Threshold Summary
Sebesta Road Comprehensive Plan
Traffic Mitigation Plan

Street Name	Limits		Acceptable Volume Range (vehicles per day)
	From	To	
Emerald Parkway	AMS Road	Sandstone Drive	5,000
Sandstone Drive	Emerald Parkway	Sebesta Road	2,000
Sebesta Road	SH 6 EFR	AMS Road	5,000
Sebesta Road	AMS Road	Sandstone Drive	3,000
Foxfire Drive	Sebesta Road	Stonebrook Drive	2,000
Stonebrook Drive	Foxfire Drive	Rock Prairie Road	3,000
Woodcreek Drive	SH 6 EFR	Stonebrook Drive	3,500

Monitoring Process

The City of College Station - Public Works Department will conduct traffic counts on each of the following roadway segments on an annual basis or following development projects in the area that significantly increase traffic.

- Emerald Parkway (between proposed AMS Road and Sandstone Drive)
- Sandstone Drive
- Sebesta Road (between SH 6 EFR and Foxfire Drive)
- Sebesta Road (between Foxfire Drive and Sandstone Drive)
- Foxfire Drive
- Stonebrook Drive
- Woodcreek Drive

The City will conduct an online neighborhood resident perception survey on an annual basis timed with the traffic counts.

Action Plan

When any volume threshold is exceeded, a Neighborhood Traffic Mitigation Committee (NTMC) will be formed and will start meeting within three months of the traffic count.

The NTMC will be comprised of up to twelve (12) voting members as selected by city staff with assistance from the neighborhood associations within the project area. Voting members must be property owners living in the study area. Special consideration for selection will be given to neighborhood representatives who served on the committee that drafted the traffic mitigation plan. The members of the NTMC should represent the entire study area. The study area is bound by SH 6 on the west, Rock Prairie Road on the south, Carter Creek on the east, and Bee Creek on the north. No more than two (2) committee members may live on any one street within the study area. City transportation planning and traffic engineering staff will act as facilitators for this committee.

Upon meeting, the NTMC will work to define the problem and identify potential solutions. Traffic data and the neighborhood perception survey results may be used by the committee as tools in defining the problem. If the NTMC agrees that the traffic volume threshold that was exceeded was set too low, they may adjust the traffic volume thresholds and discontinue meeting. The monitoring process would continue. Upon mitigation, these survey results will be used as a tool by the neighborhood traffic mitigation committee (NTMC) to identify problems and solutions.

Any traffic mitigation solution may be considered as long as it does not present an increased safety hazard and it complies with national traffic engineering standards. Any mitigation solution where the cost exceeds $75,000 may be considered a capital project and may have to be funded through this process. Some examples of possible solutions are included as Appendix A – Neighborhood Traffic Calming Toolbox.

In the process of developing a traffic mitigation proposal, the NTMC may host an open house to receive input from interested citizens within the study area. Once the NTMC develops a proposed neighborhood traffic mitigation plan, the property owners within the study area will vote to approve or disapprove the plan. Prior to this vote, the NTMC may host a second open house to present the plan to the neighborhood. Following that meeting, it is the NTMC property owners' responsibility, with help from city staff, to market the plan to the neighborhoods.

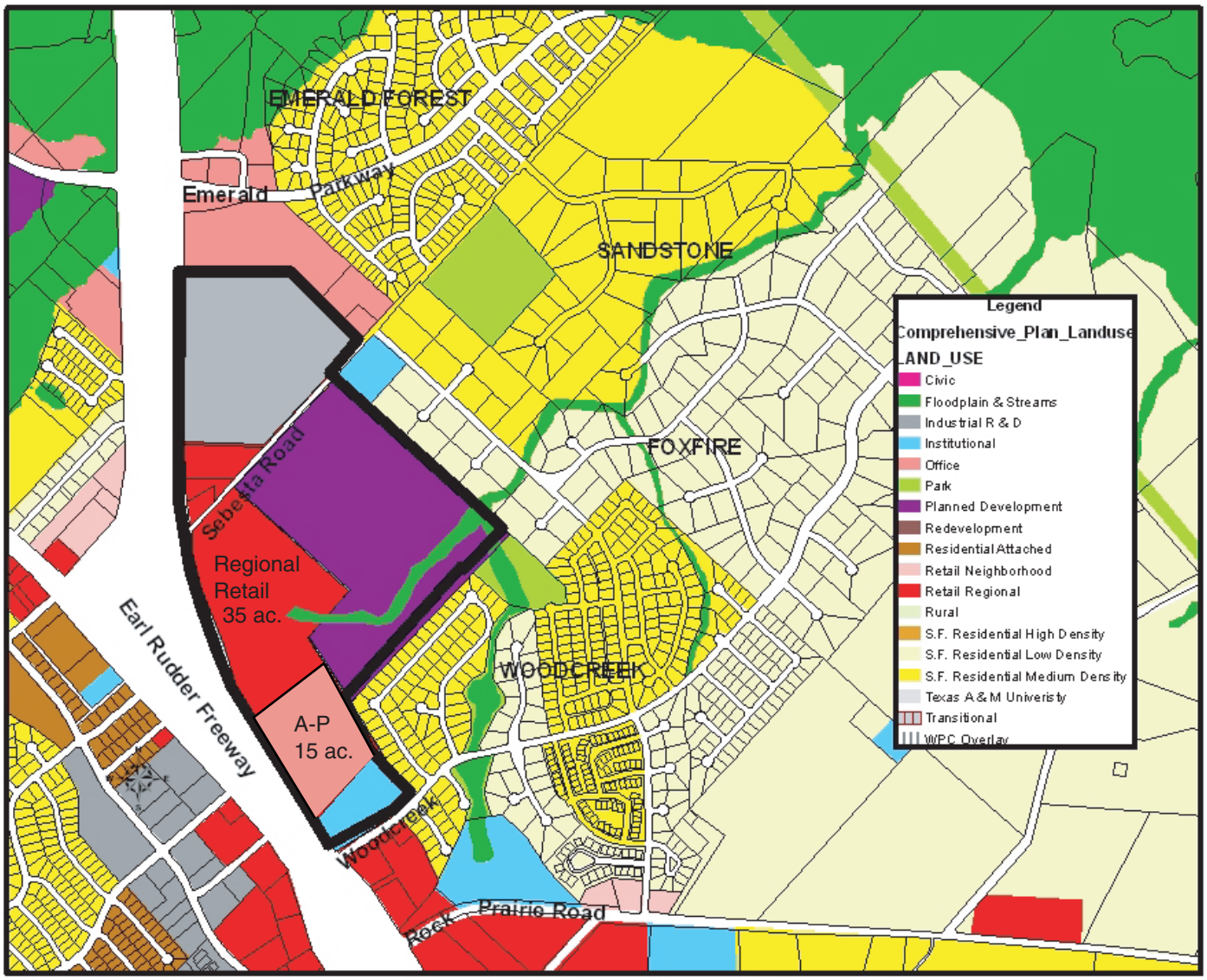
For the plan to be implemented, it is required that a simple majority of the return ballots be cast in approval of the proposed plan. If the plan is approved, final plans for the proposed neighborhood traffic mitigation plan will be developed and implemented. If the plan is disapproved, the NTMC may not convene until at least two years following the initial NTMC meeting.

As discussed in the purpose statement, successful implementation not only includes addressing future traffic issues in the Sebesta area, but also making a commitment to long-range planning

in College Station. This commitment requires resources to assist staff in providing information to appointed and elected officials. Providing the best information to these decision makers will help them make decisions to reduce or eliminate future recurrences of similar problems throughout the City.

APPENDICES

APPENDIX A:
LAND USE PLAN PROPOSAL



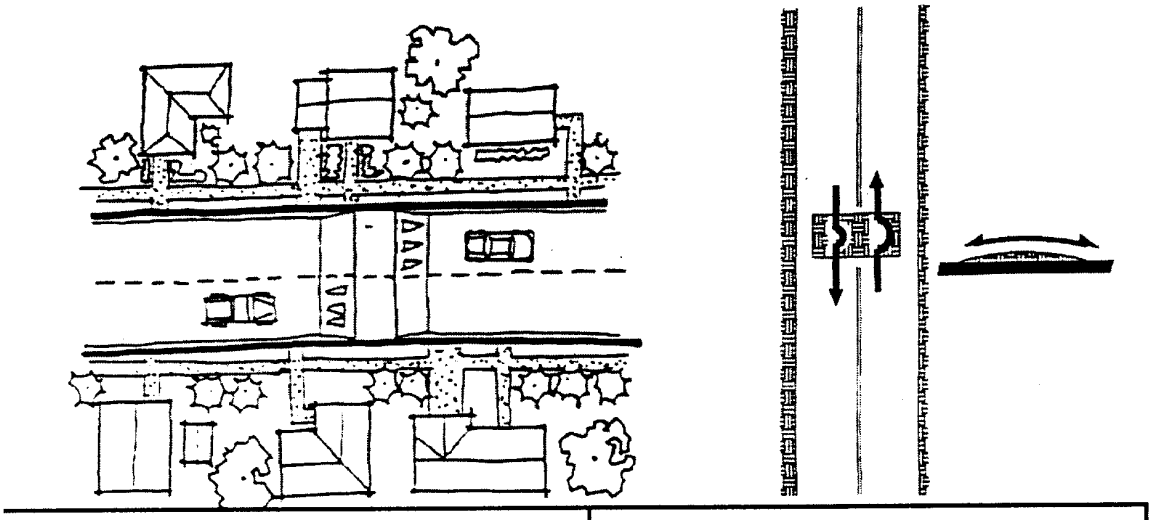
Comprehensive Plan amendment to change to Regional Retail and Administrative Professional uses on the land use plan. Future rezoning of the land designated as Regional Retail is contingent upon the creation of a new East Bypass Zoning District that is consistent with the uses specified in the East Bypass Small Area Action Plan or by use of a PDD or its facsimile. In addition, future development of the land designated as Regional Retail is incumbent on the concomitant implementation of traffic mitigation measures to alleviate the high volume of cut-through traffic that will result on Emerald Parkway, Sandstone Dr., Sebesta Rd., Foxfire Dr. and Stonbrook Dr.

At the same time A-P Office zoning will be requested for the property abutting the Lutheran Church up to Technology Dr.

APPENDIX B:
NEIGHBORHOOD TRAFFIC CALMING TOOLBOX

APPENDIX B
NEIGHBORHOOD TRAFFIC CALMING TOOLBOX

SPEED HUMP



DESCRIPTION:

Speed humps are raised sections of pavement across the travel way with curved transitions. These measures are 22 feet in length and approximately 3 to 4 inches high. The design consists of 6 feet transitions to a 10 feet flat surface.

The purpose of a speed hump is to reduce speeds by vertically deflecting- the wheels and frame of a vehicle. The occupants experience an uncomfortable sensation if the vehicle travels at speeds greater than the design speed of the speed hump.

ADVANTAGES:

- Reduces vehicle speed. More effective if used in a series at 300' to 500' spacing or in conjunction with other traffic calming measures.
- Can reduce vehicular volumes.
- No restrictions to on-street parking.
- Requires minimum maintenance.

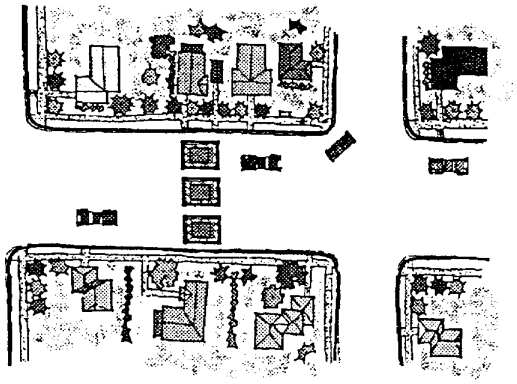
DISADVANTAGES:

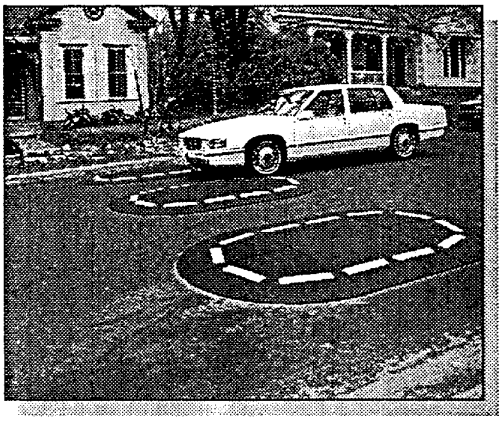
- May divert traffic to parallel streets that do not have traffic calming measures.
- Increases emergency response times.
- Required signage may be considered unsightly.

COST:

- Low

SPEED CUSHIONS





DESCRIP'TION:

Speed cushions consist of raised pavement of pavement raised 3-4 inches in height. The length of the cushion is a minimum of 9 feet. The spaces between the cushions allow wider emergency vehicles to partially straddle the measure.

ADVANTAGES:

- Reduces vehicle speed. More effective if used in a series at 300' to 500' spacing or in conjunction with other traffic calming measures.
- Can reduce vehicular volumes.
- No restrictions to on-street parking.
- Requires minimum maintenance.
- Less impact to emergency response times than speed humps.

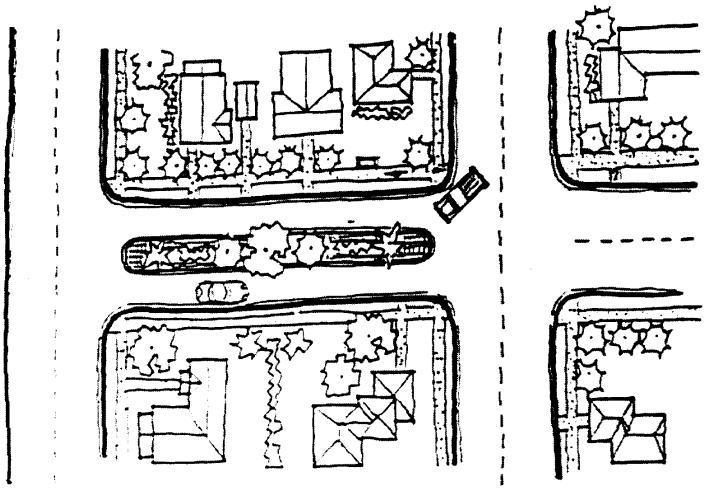
DISADVANTAGES:

- May divert traffic to parallel streets that do not have traffic calming measures.
- Increases emergency response times.

COST:

- Moderate/ Expensive

RAISED CENTER MEDIAN



DESCRIPTION:

Raised center medians are raised islands constructed in a street. They are typically landscaped with ground cover, bushes and trees or paved with decorative pavers. Raised center medians create narrowed lanes and encourage motorist to slow through the narrow section.

Raised center medians may be used in conjunction with speed cushons.

ADVANTAGES:

- Reduces lane width and vehicular speed.
- Provides aesthetic visual break up on long straight residential streets.
- Used as a neighborhood entry, provides visual que to motorists that they are entering a neighborhood.
- Can be combined with speed cushions.

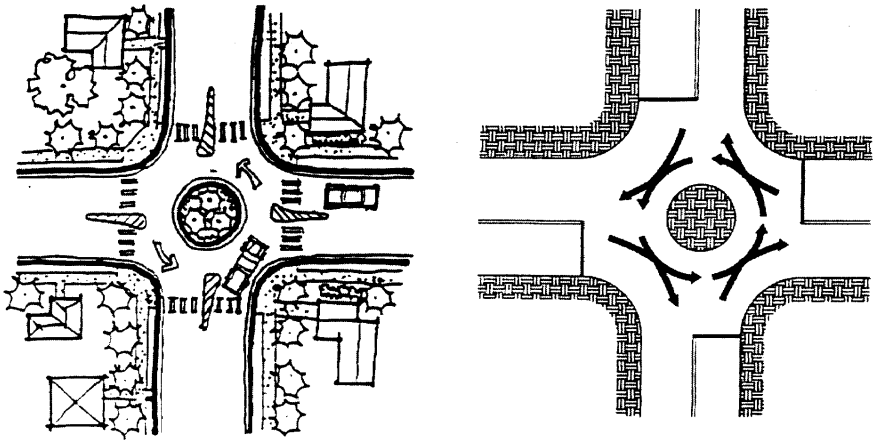
DISADVANTAGES:

- Curbside parking must be prohibited.
- Maintenance responsibility if landscaped.
- May have little or no impact on cut-through traffic.

COST:

- High

TRAFFIC CIRCLE



DESCRIPTION:

Traffic circles are raised islands constructed at intersections. They are typically landscaped with ground cover, bushes and trees. Traffic circles require drivers to slow to a speed that allows them to comfortably maneuver around them.

Motorists travel in a counter-clockwise direction around the circle. Traffic circles are "yield upon entry" meaning that vehicles in the circle have the right of way and vehicles entering the circle must wait to do so until the path is clear.

ADVANTAGES:

- Reduces speed at intersection approach.
- Reduces vehicle conflicts at intersection.
- Provides equal access to intersection for all drivers.
- Does not restrict access to residents.
- When landscaped, traffic circles improve the appearance of a street.

DISADVANTAGES:

- A minimum of 30 feet of curbside parking must be prohibited at each comer of the intersection.
- May not reduce cut-through traffic.
- Will increase emergency response time.
- Can restrict access for trucks and longer school buses, and may require that these vehicles turn left in a clockwise direction (in front of the circle, rather than around the circle).
- Maintenance responsibility, if landscaped.

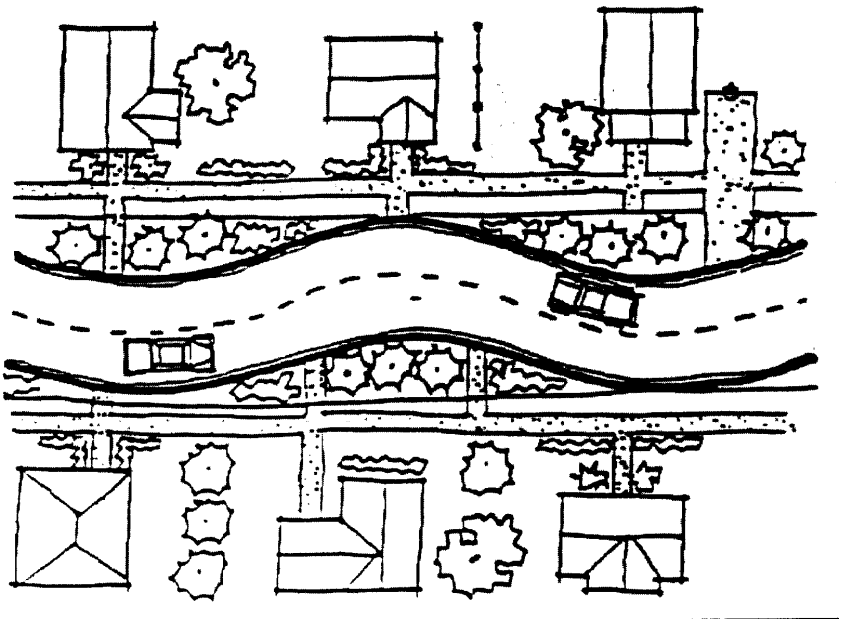
OTHER CONSIDERATIONS:

- If well maintained, traffic circles can be very attractive. However, traffic control signs and pavement markings associated with circles decrease aesthetics.
- Most effective in reducing speeds when used in series (two or more consecutive intersections) or in conjunction with other traffic calming measures.
- May require educational campaign and learning period.

COST:

- High

CHICANE



DESCRIPTION:

A chicane is a series of two or more staggered curb extensions on alternating sides of the roadway. They are usually landscaped with ground cover, bushes and trees. Horizontal deflection encourages motorists to slow through chicane.

Small raised island may be added to the design. These islands between or aligned with the curb extensions emphasizes the curvilinear alignment and prevent motorist from crossing the center line

ADVANTAGES:

- Reduces speed.
- Does not restrict access to residents.
- Minimal impact to emergency vehicles.
- Reduces crossing distance for pedestrians.
- Can be aesthetically pleasing, if landscaped.

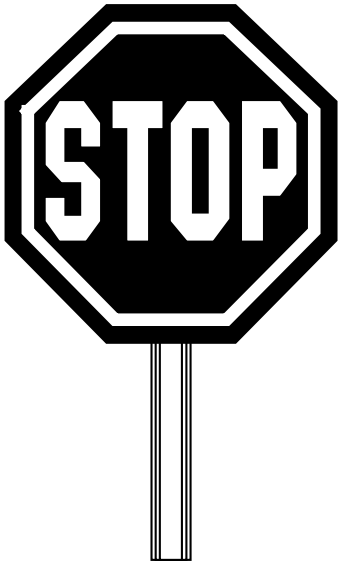
DISADVANTAGES:

- Curbside parking must be prohibited.
- Maintenance responsibility, if landscaped.
- May have little or no impact on cut-through traff**ic.**

COST:

- High

ALL-WAY STOP SIGNS



DESCRIPTION:

Stop signs on the "main street" at an intersection where typically only the "side street" would be required to stop

ADVANTAGES:

- Requires through traff**ic** to stop at an intersection.
- Increases opportunities for pedestrians to cross the roadway.
- May discourage cut-through traffic.

DISADVANTAGES:

- May create compliance problems if motorist do not acknowledge the need to stop.
- Mid-block speeds may increase as motorists try to make up for the lost time.
- Safety issues for pedestrians when compliance is poor.
- May increase emergency response time.

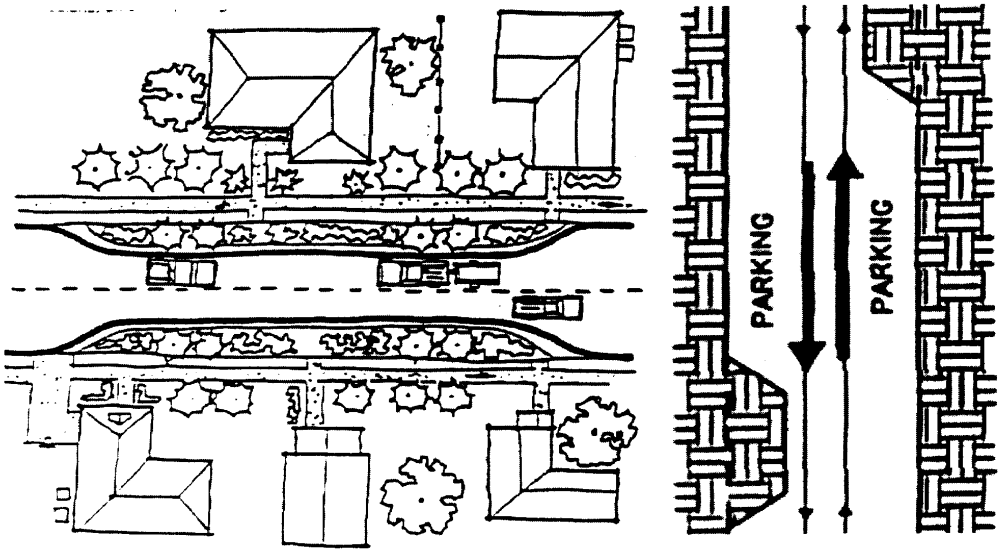
OTHER CONSIDERATIONS:

- All-way stop warrant study must be conducted to justify the all-way stop.
- Special consideration may be given to the intersection of two residential collectors.

COST:

- Low / High (Inexpensive to install, expensive to enforce)

CHOKERS, CURB EXTENSIONS, OR BULB-OUTS



DESCRIPTION:

Street physically narrowed to expand sidewalks and landscaped areas; possibly adding medians, on street parking, etc. These measures narrow the pavement by widening the sidewalk area at strategic locations. They provide shorter pedestrian crossing distances and provide protection to the beginning of a parking lane. The driver also senses the roadway narrowing when approaching one of these measures, which can result in speed reduction and a sense that the driver is entering a residential area.

ADVANTAGES:

- Minor inconvenience to drivers
- Minimal inconveniences to local traffic
- Good for pedestrians due to shorter crossing distance
- Provides space for landscaping
- Slows traffic without seriously affecting emergency response time
- Effective when used in a series
- Single lane narrowing reduces vehicle speed and through traffic

DISADVANTAGES:

- Double lane narrowing not very effective at reduced speeds or diverting through traffic
- Only partially effective as a visual obstruction
- Unfriendly to cyclists unless designed to accommodate them
- Conflict between opposing drivers arriving simultaneously could create problems

COST:

- Medium to High

APPENDIX C:
SUMMARY OF GUIDANCE INVOLVING INDIVIDUAL STREET CHARACTERISTICS

DRAFT Summary of Guidance Involving Individual Street Characteristics									
		Minor Collectors per Thoroughfare Plan							
Variable	Guidance	Emerald Parkway		Sandstone	Sebesta		Foxfire	Stonebrook	Woodcreek
		W(9N)	E(9N)		E(10N)	W(10N)			
Current 2005 Volume (ADT)		4,100	4,100	1,200	1,000	1,000	750	2,050	1,900
Predicted Volume (ADT)	3,000(1), (1N) 5,000(7)	7,400(3)	7,400(3)	3,900(3)	3,600(3)	5,900(3)	3,300(3)	4,800(3)	3,000(3)
Agreed upon Maximum Threshold Volumes (ADT)		7,000	5,000	2,000	3,000	5,000	2,000	2,500	3,000
Percent Change in Total Volume(13N)		180 (2N) **Increase**	180 (2N) **Increase**	325 (2N) **Increase**	360 (2N) **Increase**	590 (2N) **Increase**	440 (2N) **Increase**	234 (2N) **Increase**	158 (2N) **Increase**
Percent Difference in the Change in Volume(14N)		80 (2N) **Increase**	80 (2N) **Increase**	225 (2N) **Increase**	260 (2N) **Increase**	490 (2N) **Increase**	340 (2N) **Increase**	134 (2N) **Increase**	58 (2N) **Increase**
Percent Change in Total Volume under Suggested Maximum Threshold Volumes		170 **Increase**	121 **Increase**	167 **Increase**	300 **Increase**	500 **Increase**	267 **Increase**	120 **Increase**	184 **Increase**

Variable	Guidance	Emerald Parkway		Sandstone	Sebesta		Foxfire	Stonebrook	Woodcreek
		W(9N)	E(9N)		E(10N)	W(10N)			
Speed (mph)	<= 30(1), (3N) 35(7)	35	35	35	35	35	35	35	35
Lane Width (ft)	10(1)	✓	✓	✓	✓	✓	✓	✓	✓
Surface Width (ft)	<= 37(1) 38(2)	65(6)	65(6)	35(6)	38(6)	38(6)	24(6)	38(6)	38(6)
Shoulder Width (ft)	2(4)	NA	NA	NA	NA	NA	X	NA	NA
Bicycle Lanes		✓	✓	X	✓	✓	X	X	X
ROW (ft)	60+(1) 70(7)	90	90	60	60	60	60	60	60
Driveways	(4N)	✓	✓ (12N)	X	X	✓ (12N)	X	✓	✓
Houses Front Street	(5N)	✓	X	X	✓	✓	X	X	X
Setbacks (ft)	25 front(4), 15 front(4), (11N), 20 rear(4), 15 side(4) ?	✓	✓	✓	✓	✓	✓	✓	✓
Sidewalks	Desirable(1) Both Sides(2)	✓	✓	X	✓	✓	X	✓	✓
Max number of dwellings served	400(1)	?	?	?	?	?	?	?	?

Variable	Guidance	Emerald Parkway		Sandstone	Sebesta		Foxfire	Stonebrook	Woodcreek
		W(9N)	E(9N)		E(10N)	W(10N)			
Length of Segment (miles)	This is an approximate estimation	0.3	0.5	0.1	0.3	0.7	0.7	1.0	1.0
"Functional Continuity" (miles)	0.5(1) Additional Comments Refer below(6N), (7N), (8N)	✓	X	X	X	X	X	X	X

Key:
X – Does not meet criteria
✓ – Meets the minimum suggested criteria
? – Information is currently unknown

Source:

1) Institute of Transportation Engineers, Transportation and Land Development 2nd Edition.
2) College Station Comprehensive Plan of 1997.
3) Sebesta Traffic Mitigation Plan.
4) Unified Development Ordinance, City of College Station Planning & Development Services September 2004.
5) Transportation Planning for Your Community, National Transportation Library Accessed Feb. 2006 www.bts.gov/ntl/DOCS/PMF.html.
6) Measured values and that were recorded in Excel File (sent by Ken Fogle).
7) Design Guidelines Streets and Alleys (Provided by Ken Fogle).
8) Email provided by Ken Fogle

Additional Notes:
1N) ITE Volumes are defined on page 13-8, table 13-2(1).
2N) Page 17, "College Station should locate and design thoroughfares to provide a high level of design amenity and neighborhood preservation,

including the consideration of neighborhood traffic management programs in developed areas.[2]"

3N) The 85th percentile speeds on streets with "cut-through" traffic were substantially higher than on other residential streets (source: ITE T and LD pg 13-7).

4N) The City of College Station Unified Development Ordinance states, "No single-family dwelling, townhouse, or duplex shall take direct access to minor collector streets except when permitted by the Subdivision Regulations [4]." The Subdivision Regulations give the Planning and Zoning Commission the ability to allow driveways on minor collectors in some cases. (Therefore, homes may front on these roadways as long as access is provided by an alley. [4]

5N) Page 13-7 City of San Antonio, ordinance 18, single family residences shall not front collector streets[1].

6N) Collectors penetrate, but should not have continuity through, residential areas[1].

7N) Page 18, "College Station should continue to encourage that new developments be designed to minimize cut-through traffic, especially in residential neighborhoods and pedestrian areas, such as Eastgate/College Hills, the East bypass neighborhoods and southside.[2]"

8N) To prevent collector streets from being use as arterial routes avoid selecting collector streets in contiguous neighborhoods that form a continuous route [5].

9N) The east "E" and west "W" separation of Emerald Parkway is located at the final driveway entrance of AMS corporation. The "E" segment travels into Emerald Forest, while the "W" segment does not.

10N) The east "E" and west "W" separation of Sebesta is located at the intersection with Foxfire drive. The "E" segment is located between the park and the back of Emerald Forest, while the "W" segment is more commercial with no current proximity to residential land use.

11N) The City of College Station Unified Development Ordinance includes the following setback requirements: front - 25', rear - 20', side - 15' (Minimum front setback may be reduced to 15' when approved rear access is provided, or when side yard or rear yard parking is provided.). These guidelines apply to all street types.

12N) Residential Driveways

13N) $$Change = \left(\frac{Future\_Volume}{Current\_Volume} \right) * 100$$

14N) $$Percent\_Difference = \left(\frac{(Future\_Volume - Current\_Volume)}{Current\_Volume} \right) * 100$$